

In the Claims:

Please amend independent claims 2 and 23 to read as follows:

E1
2. (Five Times Amended) A semiconductor comprising:
 a semiconductor substrate material having a surface;
 a barrier film in direct contact with said semiconductor substrate surface, said barrier film having a layer comprising elemental barium atoms on said surface;
 a conductor on said barrier film, said conductor having a tendency to diffuse into said semiconductor substrate material if in direct contact therewith; and wherein said elemental barium atoms are between said conductor and said semiconductor substrate such that said layer serves as a barrier, inhibiting diffusion of the conductor into the semiconductor substrate material.

E2
23. (Four Times Amended) A semiconductor device comprising:
 a semiconductor substrate;
 a barrier film comprising elemental barium atoms, having a thickness in the range of approximately 5 Å to approximately 100 Å in direct contact with said substrate; and
 a metallic material positioned on said barrier film such that said elemental barium atoms are between said metallic material and said semiconductor substrate.

REMARKS

This amendment is submitted in response to the Office Action dated October 10, 2001, and further to the Personal Interview that was held on December 12, 2001. Claims 2 and 23 have been amended. After entry of this amendment, claims 1-13, 21 and 23-28 will be pending in the application. Entry of the Amendment, reconsideration and allowance is respectfully requested in view of the remarks made below.

1. The Personal Interview and the Prior Art Rejections

In the Office Action dated October 10, 2001, Claims 2-13, 23-26, and 28 were rejected under 35 U.S.C. §103 (a) based on U.S. Patent No. 5,962,921 to Farnworth et al.